Fact Sheet

NPDES Permit Number:	ID-002017-6
Date:	May 9, 2001
Public Notice Expiration Date:	June 11, 2001
Technical Contact:	Lisa Jacobsen 206/553-6917 or 1-800-424-4372 (within Region 10) jacobsen.lisa@epa.gov

The U.S. Environmental Protection Agency (EPA) Proposes to Reissue a Wastewater Discharge Permit to:

City of Aberdeen Wastewater Treatment Facility
17 North Main Street
Aberdeen, Idaho 83210

and the State of Idaho proposes to Certify the Permit

EPA Proposes NPDES Permit Reissuance

EPA proposes to reissue a National Pollutant Discharge Elimination System (NPDES) permit to the City of Aberdeen Wastewater Treatment Facility. The draft permit sets conditions on the discharge of pollutants from the City's waste water treatment plant to the Aberdeen Drain and eventually to the American Falls Reservoir in the Snake River. This fact sheet includes:

- information on public comment, public hearing, and appeal procedures
- a description of the current and proposed discharge and biosolids practices
- a listing of past and proposed effluent limitations and other conditions
- a map and description of the discharge location
- detailed background information supporting the conditions in the draft permit

Idaho State Certification

The Idaho Department of Environmental Quality proposes to certify the NPDES permit for The City of Aberdeen Wastewater Treatment Facility, under section 401 of the Clean Water Act.

Public Comment

Persons wishing to comment on or request a public hearing for the draft permit may do so in writing by the expiration date of the public notice. A request for a public hearing must state the nature of the issues to be raised, as they relate to the permit, as well as the requester's name, address and telephone number. All comments and requests for public hearings must be in writing and submitted to EPA as described in the Public Comments section of the attached public notice. After the public notice expires, and all substantive comments have been considered, EPA's regional Director for the Office of Water will make a final decision regarding permit reissuance.

Persons wishing to comment on State certification should submit written comments by the public notice expiration date to State of Idaho, Department of Environmental Quality, Pocatello Regional Office, 224 South Arthur, Pocatello, Idaho 83240.

If no substantive comments are received, the tentative conditions in the draft permit will become final, and the permit will become effective upon issuance. If comments are received, EPA will address the comments and issue the permit. The permit will become effective 30 days after the issuance date, unless an appeal is submitted to Environmental Appeals Board within 30 days.

Documents are Available for Review

The draft NPDES permit and related documents can be reviewed or obtained by visiting or contacting EPA's Regional Office in Seattle between 8:30 a.m. and 4:00 p.m., Monday through Friday (See address below).

United States Environmental Protection Agency
Region 10
1200 Sixth Avenue, OW-130
Seattle, Washington 98101
(206) 553-6917 or
1-800-424-4372 (within Alaska, Idaho, Oregon and Washington)

The fact sheet and draft permit are also available at:

EPA Operations Office
1435 North Orchard Street
Boise, Idaho 83700

The draft permit and fact sheet can also be found by visiting the Region 10 website at www.epa.gov/r10earth/water.htm. For technical questions regarding the permit or fact sheet, contact Lisa Jacobsen at the phone numbers or email address at the top of this fact sheet.

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LIST OF ACRONYMS

BMP	Best Management Practices
BOD_5	Five-day Biochemical Oxygen Demand
CFR	Code of Federal Regulations
cfs	Cubic feet per second
CWA	Clean Water Act
DMR	Discharge Monitoring Report
EPA	United States Environmental Protection Agency
IDEQ	Idaho Department of Environmental Quality
mgd	Million gallons per day
mg/l	Milligrams per liter
NMFS	National Marine Fisheries Service
NPDES	National Pollutant Discharge Elimination System
O&M	Operation and Maintenance
POTW	Publicly Owned Treatment Works
TMDL	Total Maximum Daily Load
TSD	*Technical Support Document for Water Quality-based Toxics Control*, (EPA 1991)
TRC	Total Residual Chlorine
TSS	Total Suspended Solids
USFWS	United State Fish and Wildlife Service
WWTF	Wastewater Treatment Facility
WLA	Wasteload Allocation
µg/L	Micrograms per liter

BACKGROUND INFORMATION

I. APPLICANT

City of Aberdeen Wastewater
Treatment Facility (WWTF)

NPDES Permit No.: ID-002017-6

Facility Location:
17 North Main Street
Aberdeen, Idaho 83210

Mailing Address:
P.O. Box 190
Aberdeen Idaho 83210

II. FACILITY ACTIVITY

The City of Aberdeen (population of 1,800) owns and operates a facility that provides secondary treatment and disinfection of domestic and industrial wastes prior to discharge to the Aberdeen Drain and eventually to the American Falls Reservoir in the Snake River. The current average design flow of the facility is 0.6 million gallons per day (mgd). Based on data submitted by the permittee, the current annual average flow is 0.43 mgd. In addition, sludge generated by this facility is ultimately disposed of in the city landfill, along with construction debris.

See Appendix A for a map of the location of the treatment plant and discharge. Appendix B contains a detailed discussion of the treatment processes and waste streams.

III. RECEIVING WATER

The Aberdeen WWTF discharges throughout the year to the American Falls Reservoir/Snake River via the Aberdeen Drain. The state of Idaho Water Quality Standards and Wastewater Treatment requirements protect the four mile long Aberdeen Drain and the American Falls Reservoir for domestic water supply, agricultural water supply, cold water biota, and primary and secondary contact recreation

IV. FACILITY BACKGROUND

The effective and expiration dates of the existing permit were March 11, 1996 and March 12, 2001 respectively. The permit contained secondary treatment and sludge handling requirements.

The permittee submits monthly discharge monitoring reports (DMRs) to EPA summarizing the results of effluent monitoring required by the permit. The DMRs

for the years 1996 to 2000 showed that the Aberdeen wastewater facility was generally in compliance with all terms of the existing permit. Based on the DMRs from the past five years, the permittee has reported twenty-eight violations of the permit. The permittee did not achieve 85% removal of TSS five times and BOD_5 five. They were over the BOD_5 limits two times and TSS eleven. And, the permittee was over the fecal coliform limit five times.

V. EFFLUENT LIMITATIONS

EPA followed the Clean Water Act, State and federal regulations, and EPA's 1991 *Technical Support Document for Water Quality-Based Toxics Control (TSD)* to develop the proposed effluent limits. In general, the Clean Water Act requires that the effluent limits for a particular pollutant be the more stringent of either the technology-based or water quality-based limits.

Technology-based limits are set based on the level of treatment that is achievable using readily available technology. In the case of this facility, technology-based limits cover five parameters: five day biochemical oxygen demand (BOD_5), total suspended solids (TSS), pH, fecal coliform bacteria, and total residual chlorine.

The Agency evaluates the technology-based limits to determine whether they are adequate to ensure that water quality standards are met in the receiving water. If the limits are not adequate, EPA must develop additional water quality-based limits. These limits are designed to prevent exceedances of the Idaho water quality standards in the Snake River. The proposed permit includes water quality-based limits for E. coli.

Table 1 compares the limits in the 1996 permit with those in the draft permit. *Appendix C* provides the basis for the development of technology-based and water quality-based effluent limits.

Table 1: Outfall 001 Effluent Limits

Parameter	Average Monthly Limit		Average Weekly Limit		Instantaneous Maximum Limit		Range Limit	
	Draft	1996	Draft	1996	Draft	1996	Draft	1996
Flow, mgd	---	4.2	---	---	---	---	---	---
BOD_5								
mg/l	30	30	45	45	---	---	---	---
lb/day	150	150	225	225				
Percent Removal[1]	85	85						
TSS								
mg/l	30	30	45	45	---	---	---	---
lb/day	150	150	225	225				
Percent Removal[1]	85	85						
E. coli[2]								
#/100 ml	126	---	---	---	406	---	---	---
Fecal coliform								
#/100 ml	---	100	200	200	---	---	---	---
Total Residual Chlorine								
mg/l	0.5	---	0.75	---	—	---	---	---
lb/day	2.5		3.75					
pH, std units	---	---	---	---	---	---	6.5-9.0[3]	6.5-9.0[3]

Footnotes:
1 The percent removal requirements represent a minimum.
2 The 1996 permit required fecal coliform limits only. The draft permit requires E. coli limits as well.
3 The 1996 and draft permits require that the pH be within the specified range at all times

The draft permit prohibits the discharge of waste streams that are not part of the normal operation of the facility, as reported in the permit application. The draft permit also requires that the discharge be free from floating, suspended, or submerged matter in concentrations that cause/may cause a nuisance.

VI. SLUDGE (BIOSOLIDS) MANAGEMENT REQUIREMENTS

The proposed NPDES wastewater permit does not contain requirements related to sewage sludge. EPA Region 10 has recently decided to change the regional approach to permitting the disposal of biosolids ("sewage sludge" or sludge") and to separate wastewater and biosolids into separate permits. EPA will issue a biosolids only permit to this facility at a later date. Biosolids permit coverage may be in the form of a general permit in which EPA can cover and better serve multiple facilities with similar limitations and management requirements.

The Clean Water Act (CWA) prohibits the disposal of biosolids not in compliance with 40 CFR 503 and provides EPA with the authority to enforce these regulations directly (even in the absence of a permit). Removal of specific biosolids requirements from the proposed permit does not remove the responsibility of the facility to comply with the requirements of these regulations. The state of Idaho currently conducts a program to regulate the management of biosolids. If the applicant performs biosolids activities in accordance with the federal and state regulations, the environment should be protected until such time as a biosolids-only permit is prepared for this facility.

The proposed permit requires the permittee submit a biosolids permit application for this facility.

VII. MONITORING REQUIREMENTS

A. Monitoring

Section 308 of the Clean Water Act and federal regulations (40 CFR 122.44(i)) require that monitoring be included in permits to determine compliance with effluent limitations. Additional effluent and receiving water monitoring may also be required to gather data to determine if effluent limitations maybe required or to monitor effluent impacts on receiving water quality. The City of Aberdeen is responsible for conducting the monitoring and for reporting results on Discharge Monitoring Reports (DMRs) to EPA.

Tables 2a, 2b, and 2c compare the proposed monitoring requirements in the draft permit to those in the 1996 permit. Monitoring frequency is based on the minimum sampling necessary to adequately monitor the facility's performance as well as the monitoring requirements in the 1996 permit.

TABLE 2a: Effluent Monitoring Requirements for Outfall 001		
Parameter	**Draft Sample Frequency**	**1996 Sample Frequency**
$BOD_{5,}$ mg/l[1]	1/Week	1/Week
TSS, mg/l[1]	1/Week	1/Week
E. coli Bacteria, #/100 ml	5/month	—
Fecal coliform Bacteria, #/100 ml	5/Week	1/Week
Total Residual Chlorine, mg/l	5/week	---
Total Ammonia as N, mg/l[1]	Quarterly	---
Nitrate-Nitrite as N, mg/l	Quarterly	---
Total Kjeldahl nitrogen as N, mg/l	Quarterly	---
Total Phosphorus as P, mg/l	Quarterly	---
Temperature, °C[1]	Quarterly	—
Dissolved Oxygen	Quarterly	---
pH, standard units[2]	5/week	Daily

Footnotes:
1 The draft permit and the 1996 permit require influent and effluent monitoring to determine compliance with effluent limitations and percent removal requirements.
2 The draft permit requires the permittee to report the number and duration of pH excursions during the month.

TABLE 2b: Receiving Water Monitoring Requirements, Upstream		
Parameter	**Draft Sample Frequency**	**1996 Sample Frequency**
Flow	Quarterly	---
Ammonia[1]	Quarterly	---
Temperature[1]	Quarterly	---
pH, standard units[1]	Quarterly	—

Footnotes:
1 These parameters shall be monitored at the same time to the extent practicable.

TABLE 2c: Receiving Water Monitoring Requirements, End of Aberdeen Drain		
Parameter	**Draft Sample Frequency**	**1996 Sample Frequency**
Total Residual Chlorine	Quarterly	---
Footnotes: 1 These parameters shall be monitored at the same time to the extent practicable.		

B. Representative Sampling

The draft permit specifically requires representative sampling whenever a bypass, spill, or non-routine discharge of pollutants occurs, if the discharge may reasonably be expected to cause or contribute to a violation of an effluent limit under the permit. This provision is included in the draft permit because routine monitoring could easily miss permit violations and/or water quality standards exceedances that could result from bypasses, spills, or non-routine discharges. This requirement directs the permittee to conduct additional, targeted monitoring to quantify the effects of these occurrences on the final effluent discharge.

VIII. OTHER PERMIT CONDITIONS

A. Quality Assurance Plan

Federal regulations at 40 CFR 122.41(e) require permittees to properly operate and maintain their facilities, including “adequate laboratory controls and appropriate quality assurance procedures.” To implement this requirement, the draft permit requires that the City develop a Quality Assurance Plan to ensure that the monitoring data is accurate and to explain data anomalies if they occur. Aberdeen is required to implement the plan within 120 days of the effective date of the draft permit. The Quality Assurance Plan must include standard operating procedures the City must follow for collecting, handling, storing and shipping samples, laboratory analysis, and data reporting.

B. Operation & Maintenance Plan

Section 402 of the Clean Water Act and federal regulations 40 CFR 122.44(k)(2) and (3) authorize EPA to require best management practices, or BMPs, in NPDES permits. BMPs are measures for controlling the generation of pollutants and their release to waterways. For municipal

facilities, these measures are typically included in the facility's Operation & Maintenance (O&M) plan. These measures are important tools for waste minimization and pollution prevention.

The draft permit requires the City of Aberdeen to incorporate appropriate BMPs into their O&M plan within 180 days of permit issuance. Specifically, the City must consider spill prevention and control, optimization of chlorine and other chemical use, public education aimed at controlling the introduction of household hazardous materials to the sewer system, and water conservation. To the extent that any of these issues have already been addressed, the City need only reference the appropriate document in its O&M plan. The O&M plan must be revised as new practices are developed.

The draft permit also requires the City to develop a plan when the annual average flow exceeds 85% of the design flow of the plant. The plan requires the City to develop a strategy for remaining in compliance with the effluent limits in the permit.

C. Additional Permit Provisions

In addition to facility-specific requirements, sections III, IV, and V of the draft permit contain "boilerplate" requirements. Boilerplate is standard regulatory language that applies to all permittees and must be included in NPDES permits. Because the boilerplate requirements are based on regulations, they cannot be challenged in the context of an NPDES permit action. The boilerplate covers requirements such as monitoring, recording, reporting requirements, compliance responsibilities, and general requirements.

IX. OTHER LEGAL REQUIREMENTS

A. Endangered Species Act

The Endangered Species Act requires federal agencies to consult with the National Marine Fisheries Service and the U.S. Fish and Wildlife Service if their actions could adversely affect any threatened or endangered species. EPA has determined that issuance of this permit will not affect any of the

threatened or endangered species in the vicinity of the discharge. See Appendix D for further details.

B. State Certification

Section 401 of the Clean Water Act requires EPA to seek certification from the State that the permit is adequate to meet State water quality standards before issuing a final permit. The regulations allow for the State to stipulate more stringent conditions in the permit, if the certification cites the Clean Water Act or State law references upon which that condition is based. In addition, the regulations require a certification to include statements of the extent to which each condition of the permit can be made less stringent without violating the requirements of State law.

C. Permit Expiration

This permit will expire five years from the effective date.

REFERENCES

EPA 1991. *Technical Support Document for Water Quality-based Toxics Control*. Office of Water Enforcement and Permits, Office of Water Regulations and Standards. Washington, D.C., March 1991. EPA/505/2-90-001.

APPENDIX A -CITY OF ABERDEEN - FACILITY MAP

APPENDIX B - CITY OF ABERDEEN WASTE STREAMS AND TREATMENT PROCESSES

I. Discharge Composition

In its NPDES application, the City of Aberdeen reported the pollutants listed in Table B-1 as being detected in its discharge from outfall 001. The toxic and conventional pollutant categories are defined in the regulations (40 CFR 401.15 and 401.16, respectively). The category of nonconventional pollutants includes all pollutants not included in toxic or conventional categories.

Table B-1: Pollutants Detected in Discharge

Pollutant type	Parameter	Maximum Reported Concentration
Conventional	5-day biochemical oxygen demand (BOD_5), weekly average	59 mg/l
	Total Suspended Solids (TSS), weekly average	65 mg/l
	pH, min - max	6.7- 8.3
	Fecal coliform Bacteria, weekly average	225/100ml
Non-Conventional	Chlorine, monthly average	1.7 mg/l
	Temperature	21 C

.

II. Treatment Processes

The Aberdeen wastewater treatment plant utilizes an activated sludge system designed to treat 600,000 gpd of wastewater while the actual daily wastewater influent flow is approximately 430,000 gpd. the facility consists of the following unit operations: grit chamber, primary clarifier, activated biofilter tower, short term aeration, secondary clarifiers, final filtration and chlorination. In addition, sludge

generated at this facility is treated in aerobic sludge digesters, dried and ultimately disposed of in the city landfill. The facility was first on line of in 1973 and has experienced no renovation since initial startup.

The facility receives industrial wastewater flows form three fresh pack potato operations; Idaho Select, Inc. (50,000 gpd), Duffin Potato, Inc., (50,000 gpd), and Pleasant Valley Fresh Pack, Inc. (50,000 gpd). Approximately 35% of the daily wastewater flow and up to 90% of the daily BOD5 and TSS loading can be contributed by these operations during periods of increased industrial production.

APPENDIX C - BASIS FOR EFFLUENT LIMITATIONS

I. Statutory and Regulatory Basis for Limits

Sections 101, 301(b), 304, 308, 401, 402, and 405 of the Clean Water Act provide the basis for the effluent limitations and other conditions in the draft permit. The EPA evaluates discharges with respect to these sections of the CWA and the relevant NPDES regulations to determine which conditions to include in the draft permit.

In general, the EPA first determines which technology-based limits must be incorporated into the permit. EPA then evaluates the effluent quality expected to result from these controls, to see if it could result in any exceedances of the water quality standards in the receiving water. If exceedances could occur, EPA must include water quality-based limits in the permit. The draft permit limits reflect whichever requirements (technology-based or water quality-based) are more stringent. The limits that EPA is proposing in the draft permit are found in Section V in the body of this fact sheet. This Appendix describes the technology-based and water quality-based evaluation for the City of Aberdeen.

II. Technology-based Evaluation

The 1972 Clean Water Act required publicly owned treatment works (POTWs) to meet performance-based requirements based on available wastewater treatment technology. Section 301 of the Act established a required performance level, referred to as “secondary treatment,” that all POTWs were required to meet by July 1, 1977.

More specifically, Section 301(b)(1)(B) of the Clean Water Act requires that EPA develop secondary treatment standards for POTWs as defined in Section 304(d)(1) of the CWA. Based on this statutory requirement, EPA developed secondary treatment regulations which are specified in 40 CFR Part 133.102. These technology-based regulations apply to all municipal wastewater treatment plants and identify the minimum level of effluent quality attainable by secondary treatment in terms of five-day biochemical oxygen demand (BOD_5), total suspended solids (TSS), and pH. In addition to the federal technology requirements, the State of Idaho has technology-based requirements for fecal coliform bacteria for municipal sewage treatment plants (See section IV of this appendix for a complete discussion of the limits based on these requirements).

III. Water Quality-based Evaluation

In addition to the technology-based limits discussed above, EPA evaluated the discharge to determine compliance with Section 301(b)(1)(C) of the Clean Water Act. This section requires the establishment of limitations in permits necessary to meet water quality standards by July 1, 1977.

The regulations at 40 CFR 122.44(d)(1) implement section 301(b)(1)(C) of the Clean Water Act. These regulations require that NPDES permits include limits for all pollutants or parameters which "are or may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to an excursion above any State water quality standard, including State narrative criteria for water quality." The limits must be stringent enough to ensure that water quality standards are met, and must be consistent with any available wasteload allocation (WLA).

Currently, there is a question as to whether the Aberdeen Drain is a man-made drain or a natural drain. The type of drain it is affects the type of water quality limits that will be put on the facility. Monitoring requirements have been developed to gather data that will be useful when a final decision is made about the drain. Receiving water monitoring will be done upstream of the facility and downstream at the end of the Aberdeen Drain. Effluent monitoring will be done at the end-of-pipe. There is a chlorine limit at the end-of-pipe and additional monitoring for chlorine will be done at the end of the drain. Also, monitoring is being required in order to gather data for a Total Maximum Daily Load (TMDL) study that will be done in 2003. The data will be used for the determination of the amount of nutrients, sediments, and DO that the city of Aberdeen will be allowed to discharge into the American Falls Reservoir by way of the Aberdeen Drain.

IV. Pollutant-specific Analysis

This section outlines the basis for each of the effluent limitations in the City of Aberdeen's draft permit.

A. Biochemical Oxygen Demand and Total Suspended Solids

The Aberdeen Wastewater Facility is a publicly owned treatment works (POTW). As such, the facility is subject to the technology-based requirements for BOD_5 and TSS of 40 CFR 133.102, as outlined in Table C-2.

Table C-2: Secondary Treatment Requirements			
Parameter	**Average Monthly (mg/l)**	**Average Weekly (mg/l)**	**Percent Removal (%)**
BOD_5	30	45	85
TSS	30	45	85

In addition to the concentration limits, 40 CFR 122.45(f) requires that NPDES permits contain mass-based limits for most pollutants. Mass-based limits in lbs/day are derived by multiplying the design flow in mgd by the concentration limit in mg/l by a conversion factor of 8.34.

B. Total Ammonia (as N)

Low concentrations of ammonia can be toxic to freshwater fish, particularly salmonids. Un-ionized ammonia (NH_3) is the principal toxic form of ammonia. The ammonium ion (NH_4^+) is much less toxic. The relative percentages of these two forms of ammonia in the water vary as the temperature and pH vary. As the pH and temperature increase, the percentage of ammonia that is in the un-ionized form increases, causing increased toxicity. However, there is not enough data at this time to determine if a limit is needed for this facility; therefore, ammonia, pH, and temperature will be required in the draft permit at the end-of-pipe and upstream of the facility on a quarterly basis. This data will be used during the next permitting cycle to determine if water quality-based effluent limits are needed for this facility.

C. Fecal Coliform and E. coli Bacteria

In establishing fecal coliform limits for Aberdeen's draft permit, EPA considered Idaho's technology-based requirement for POTWs. And, in establishing E. coli limits for Aberdeen's draft permit EPA considered both the Idaho's water quality standard for primary recreation; and Idaho's water quality standard for secondary recreation. Since the primary recreation standards were more stringent than the secondary recreation standards only the primary recreation standards are in the permit. Table C-3 provides a summary of the requirements.

Table C-3: Idaho Fecal Coliform and E. coli Standards				
Basis	Period of Applicability	Average Monthly (#/100 ml)[1]	Average Weekly (#/100 ml)[1]	Instantaneous Maximum Daily (#/100 ml)
Technology standard for POTWs. Fecal coliform (IDAPA 16.01.02420.05)	Year-round	---	200	---
Water Quality Criterion for Primary Recreation. E. coli (IDAPA 16.01.02251.01.a)	Year-round	126	---	406
Footnotes: 1 For fecal coliform and E. coli bacteria, the average is defined as the geometric mean, based on a minimum of 5 samples.				

Because E. coli is a new standard, meeting criteria for E. coli was not a requirement in the 1996 permit, this is the first time that a limit has been included. It is anticipated that a mixing zone will not be authorized for bacteria, therefore, the criteria must be met before the effluent is discharged to the receiving water.

D. Total Residual Chlorine

The Idaho water quality standards contain criteria for total residual chlorine (TRC). The chronic criterion is 0.011mg/l and the acute criterion is 0.019 mg/l. There is not enough data about the drain at this time to develop water quality based limits for chlorine in this permit; therefore, quarterly monitoring of residual chlorine will be required in the proposed permit. This data will be used during the next permitting cycle to determine if water quality-based effluent limits are required for this facility. The sampling location will be determined through agreement with EPA and IDEQ.

If a water quality-based effluent limit is not appropriate for a discharge, or can not be calculated due to lack of information at the time of permit issuance, then EPA Region 10 establishes technology based limits for total residual chlorine disinfection. The technology-based effluent limitations of 0.5 mg/l is derived from standard operating practices. The Water Pollution Control Federation's Chlorination of Wastewater (1976) states that properly designed and well maintained wastewater treatment plants achieve adequate disinfection if a 0.5 mg/l chlorine residual is maintained after 15 to 20

minutes contact period while maintaining chlorine levels of less than 0.5 mg/L. A treatment plant that provides adequate chlorination contact time can meet the 0.5 mg/L limit on a monthly average basis. The average weekly limit for total residual chlorine has been established as 1.5 times the average monthly limit. Technological limits for this facility shall be 0.5 mg/L on a monthly average and 0.75 mg/L on a weekly average limit. And, as discussed in paragraph IV.A, 40 CFR 122.45(f) requires that NPDES permits contain mass-based limits as well as concentration limits. The mass based limits are derived by multiplying the design flow in mgd by the concentration limit in mg/l by a conversion factor of 8.34.

E. pH

In addition to limits on BOD_5 and TSS, 40 CFR 133.102 requires that effluent pH be within the range of 6.0 to 9.0 standard units for POTWs. In addition, the State water quality standards for protection of aquatic life (IDAPA 16.01.02250.02) require that ambient pH be in the range of 6.5 to 9.5 standard units. The most stringent limits are used to assure that neither technological based limits nor the water quality standards will be exceeded.

Therefore, the draft permit incorporates the water quality-based minimum of 6.5 standard units and the technology-based limit of 9.0 standard units.

F. Floating, Suspended or Submerged Matter

The State water quality standards (IDAPA 16.01.02200.05) require surface waters of the State to be free from floating, suspended, or submerged matter of any kind in concentrations causing nuisance or objectionable conditions or that may impair designated beneficial uses.

APPENDIX D - ENDANGERED SPECIES ACT

In the document entitled "Listed and Proposed Endangered and Threatened Species, and Candidate Species That May Occur within the State of Idaho" (SP #1-4-01-SP-362) the U.S. Fish and Wildlife Service (USFWS) identified the following federally-listed species in the area of discharge:

Endangered Species

- Gray Wolf (Canis lupus)
- Bald Eagle (Haliaeetus leucocephalus)
- Bliss Rapids snail (Taylorconcha serpenticola)
- Ute ladies'-tresses (Spiranthes
- diluvialis)

EPA has determined that the requirements contained in the draft permit will have **no effect** on the gray wolf, bald eagle, Bliss Rapids Snail, or Ute ladies'-tresses. Hunting and habitat destruction are the primary causes of the gray wolf's decline. Issuance of NPDES permits for the City of Aberdeen will not result in habitat destruction, nor will it result in changes in population that could result in increased habitat destruction. Furthermore, issuance of this draft permit will not impact the food sources of the gray wolf. The primary reasons for decline of the bald eagle are destruction of their habitat and food sources and widespread historic application of DDT. This draft permit will have no impact on any of these issues. The Ute ladies'-tresses and Bliss Rapids snail will not be disturbed by this permit since there will be no change in the discharge into the American Falls Reservoir than has been there for several years.